

CLAIMS

We Claim:

1 1. A vehicle sound system, comprising:
2 a dock adapted to be connected to a music storage device;
3 an audio head unit adapted to be connected to a set of one or more
4 speakers; and
5 a removable hard disk drive capable of being removably connected to said
6 dock and said audio head unit.

1 2. A vehicle sound system according to claim 1, wherein:
2 said removable hard disk drive stores music data files, said audio head unit
3 plays said music data files.

1 3. A vehicle sound system according to claim 1, wherein:
2 said removable hard disk drive stores compressed music data files received
3 from said dock; and
4 said audio head unit accesses said compressed music data files from said
5 removable hard disk drive in order to play said compressed music data files.

1 4. A vehicle sound system according to claim 1, wherein:
2 said audio head unit includes a switch that senses whether said removable
3 hard disk drive is connected to said audio head unit and prevents said audio head
4 unit from operating if said disk drive is not connected to said audio head unit.

1 5. A vehicle sound system according to claim 1, wherein:
2 said removable hard disk drive stores music data files and play lists, each
3 play list includes an identification of a set of said music data files, said audio head
4 unit plays said music data files according to said play lists.

1 6. A vehicle sound system according to claim 1, wherein:

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2 said audio head unit includes a processor; and
3 said removable hard disk drive stores a replaceable operating system for said
4 processor.

1 7. A vehicle sound system according to claim 1, further comprising:
2 a disc changer connected to said audio head unit.

1 8. A vehicle sound system according to claim 1, wherein:
2 said audio head unit includes a port for communicating with a disc changer.

1 9. A vehicle sound system according to claim 8, further comprising:
2 user replaceable program code, said user replaceable program code
3 programs said audio head unit to engage in two-way communication with said disc
4 changer.

1 10. A vehicle sound system according to claim 8, wherein:
2 said audio head unit includes a control panel; and
3 said control panel includes one or more buttons dedicated to control said
4 disc changer.

1 11. A vehicle sound system according to claim 8, wherein:
2 said audio head unit includes a radio tuner; and
3 a switch, said switch having a first input receiving music from said disc
4 changer, a second input receiving music from said radio tuner and a third input
5 receiving music based on data stored on said removable hard disk drive, and an
6 output communicated to said speakers.

1 12. A vehicle sound system according to claim 1, wherein:
2 said music storage device is a computer with a USB port; and
3 said dock connects to said USB port.

1 13. A vehicle sound system, comprising:
2 a port capable of being connected to a disc changer;
3 one or more speaker outputs;
4 one or more processor readable storage devices capable of storing user
5 replaceable interface program code and music data files; and
6 one or more processors in communication with said one or more processor
7 readable storage devices, said port and said one or more speaker outputs, at least
8 one of said one or more processors engages in two-way communication with said
9 disc changer based on said replaceable interface program code, at least one of said
10 one or more processors plays said music data files.

1 14. A vehicle sound system according to claim 13, wherein:
2 said one or more processor readable storage devices includes a removably
3 connected hard disk drive, said hard disk drive stores said music data files in a
4 compressed format; and
5 said at least one processor that plays said music data files accesses said
6 music data files from said hard disk drive.

1 15. A vehicle sound system according to claim 14, further comprising:
2 a dock connected to a computer, said hard disk drive is capable of being
3 removably connected to said dock, said hard disk drive receives said compressed
4 music data files from said dock.

1 16. A vehicle sound system according to claim 14, wherein:
2 said user replaceable interface program code is stored on said hard disk
3 drive.

1 17. A vehicle sound system according to claim 14, wherein:

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2 said one or more processor readable storage devices include a memory
3 device; and

4 said one or more processors perform a method comprising the steps of:
5 determining whether new replaceable interface program code is to
6 be loaded,

7 reading said new replaceable interface program code from said hard
8 disk drive if said new replaceable interface code is to be loaded, and

9 storing said new replaceable interface code on said memory device
10 if said new replaceable interface code is to be loaded.

1 18. A vehicle sound system according to claim 13, further comprising:

2 a radio tuner; and

3 a switch, said switch having a first input receiving music from said disc
4 changer, a second input receiving music from said radio tuner and a third input
5 receiving music from based on said music data files, and an output communicated
6 to said speakers.

1 19. A vehicle sound system according to claim 13, further including:

2 a control panel, said control panel includes one or more buttons dedicated
3 to control said disc changer.

1 20. A vehicle sound system, comprising:

2 a port capable of being connected to a disc changer;

3 one or more speaker outputs;

4 a processor readable storage device storing music data files and a set of one
5 or more play lists, each play list includes an identification of a set of said music data
6 files; and

7 one or more processors in communication with said processor readable
8 storage device, said port and said one or more speaker outputs, at least one of said
9 one or more processors engages in two-way communication with said disc changer,

10 at least one of said one or more processors plays said music data files according to
11 said play lists.

1 21. A vehicle sound system according to claim 20, wherein:
2 each play list includes an order for playing said music data files; and
3 said one or more processors play said music data according to said order.

1 22. A vehicle sound system according to claim 20, further comprising:
2 a control panel in communication with said one or more processors, said
3 control panel includes one or more controls dedicated to operating said disc
4 changer.

1 23. A vehicle sound system according to claim 22, wherein:
2 said control panel includes a control to select one of said play lists.

1 24. A vehicle sound system according to claim 22, wherein:
2 said control panel includes a control to select one of said play lists or a disc
3 from said disc changer.

1 25. A vehicle sound system according to claim 20, wherein:
2 said one or more processor readable storage devices includes a removably
3 connected hard disk drive, said hard disk drive stores said music data files in a
4 compressed format, said hard disk drive stores said play lists.

1 26. A vehicle sound system according to claim 20, wherein:
2 said one or more processors can edit said play lists to add songs from said
3 disc changer.

1 27. A vehicle sound system, comprising:
2 a control panel;

3 a port capable of being in communication with a disc changer;
4 one or more speaker outputs;
5 a processor readable storage device storing music data; and
6 one or more processors in communication with said processor readable
7 storage device, said port, said control panel and said one or more speaker outputs,
8 at least one of said one or more processors engages in two-way communication
9 with said disc changer, at least one of said one or more processors plays said music
10 data in response to said control panel.

1 28. A vehicle sound system according to claim 27, wherein:
2 said control panel has one or more controls dedicated to operating said disc
3 changer.

1 29. A vehicle sound system according to claim 27, wherein:
2 said one or more processors include a first processor for communicating
3 with said disc changer and a second processor for playing music stored on said
4 processor readable storage device.

1 30. A vehicle sound system according to claim 27, further comprising:
2 a radio tuner; and
3 an audio switch having a first input receiving music from said disc changer,
4 a second input receiving music from said radio tuner and a third input receiving
5 music based on said music data, and an output communicated to said speakers.

1 31. A vehicle sound system according to claim 30, wherein:
2 said control panel has one or more controls dedicated to operating said disc
3 changer;
4 said one or more processors include a first processor and a second
5 processor;

6 said first processor is in communication with said disc changer, said control
7 panel and said audio switch;
8 said second processor is in communication with said audio switch and plays
9 music stored on said processor readable storage device; and
10 said processor readable storage device is a removably connected hard disk
11 drive in communication with said second processor and capable of being connected
12 to a computer.

1 32. A vehicle sound system according to claim 31, wherein:
2 said music data includes compressed digital data files.

1 33. A vehicle sound system according to claim 31, wherein:
2 said music data includes files stored in MP3 format.

1 34. A method for playing music, comprising the steps of:
2 receiving and storing first user replaceable music data;
3 receiving and storing first user replaceable interface program code;
4 communicating with a first disc changer based on said first user replaceable
5 interface program code; and
6 playing said music data.

1 35. A method according to claim 34, further including the steps of:
2 receiving and storing second user replaceable interface program code after
3 said step of communicating with a first disc changer; and
4 communicating with a second disc changer based on said second user
5 replaceable interface program code.

1 36. A method according to claim 35, further including the step of:
2 decrypting said second user replaceable interface program code.

1 37. A method according to claim 34, further including the steps of:
2 receiving and storing second user replaceable interface program code after
3 said step of communicating with a first disc changer;
4 communicating with said first disc changer based on said second user
5 replaceable interface program code.

1 38. A method for playing music, comprising the steps of:
2 receiving a choice between music from a disc changer, a radio and a
3 removable hard disk drive; and
4 playing music from either said disc changer, said radio or said removable
5 hard disk drive based on said choice.

1 39. A method according to claim 38, wherein;
2 said step of playing music includes communicating with said disc changer,
3 when chosen, based on said first user replaceable interface program code.

1 40. A method according to claim 38, further comprising the steps of:
2 receiving a selection of a play list and a selection of a track for said hard
3 disk drive if said hard disk drive is chosen.

1 41. A method according to claim 38, wherein:
2 said step of receiving a choice includes receiving a selection of a button on
3 a control panel, said button is dedicated to operating said disc changer.